We Claim:

1. A composition comprising:

a) a terminal dendrimer comprising at least two attachment moieties;

b) a linker comprising:

i) at least a first a hydrophilic polymer; and

ii) a rigidity component; and

c) a functional moiety.

2. A composition according to Claim 1 wherein said linker comprises a second hydrophilic polymer.

3. A composition according to Claim 1 wherein said hydrophilic polymer comprises a polyethylene glycol polymer.

4. A composition according to Claim 3 wherein said linker comprises two polyethylene glycol polymer portion separated by a rigid rod portion.

5. A method comprising:

a) providing a composition according to claim 1; and

b) attaching a binding moiety to said functional moiety

to form a binding composition.

6. A method according to claim 5 wherein said binding moiety is a polypeptide.

7. A method according to claim 5 wherein said binding moiety is an antibody or an antibody fragment.

8. A method according to claim 7 wherein said antibody or antibody fragment is recombinant.

9. A method according to claim 8 wherein said recombinant antibody or recombinant antibody fragment is glycosylated.

10. A biosensor comprising a substrate comprising a bound binding composition, said bound composition comprising:

a) a terminal dendrimer attached to said substrate by at least two attachment moieties;

b) a linker comprising:

i) at least a first hydrophilic polymer; and

ii) a rigidity component; and

c) a binding moiety.

11. The biosensor of Claim 10 wherein said substrate is selected from the group consisting of metals, carbon, glass, functionalized glass, plastics, silica or silica-based materials, or cellulose.

12. The biosensor of Claim 10 wherein said first hydrophilic polymer comprises a polyethylene glycol polymer.

13. The biosensor of Claim 12 wherein said linker comprises two polyethylene glycol polymer portions separated by a rigid rod portion.

14. The biosensor of Claim 10 wherein said binding moiety is specific for a pathogen.

15.. The biosensor of Claim 14 wherein said pathogen is a bacteria or a virus.

16. The biosensor of Claim 15 wherein said bacteria is selected from the group consisting of: Bacillus, Vibrio, e.g. V. cholerae; Escherichia, e.g. Enterotoxigenic E. coli, Shigella, e.g. S. dysenteriae; Salmonella, e.g. S. typhi; Mycobacterium e.g. M. tuberculosis, M. leprae; Clostridium, e.g. C. botulinum, C. tetani, C. difficile, C.perfringens; Cornyebacterium, e.g. C. diphtheriae; Streptococcus, S. pyogenes, S. pneumoniae; Staphylococcus, e.g. S. aureus; Haemophilus, e.g. H. influenzae; Neisseria, e.g. N. meningitidis, N. gonorrhoeae; Yersinia, e.g. G. lambliaY. pestis, Pseudomonas, e.g. P. aeruginosa, P. putida; Chlamydia, e.g. C. trachomatis; Bordetella, e.g. B. pertussis; and Treponema, e.g. T. palladium.

17. The biosensor of Claim 15 wherein said virus is selected from the group consisting of: orthomyxoviruses, (e.g. influenza virus), paramyxoviruses (e.g respiratory syncytial virus, mumps virus, measles virus), adenoviruses, rhinoviruses, coronaviruses, reoviruses, togaviruses (e.g. rubella virus), parvoviruses, poxviruses (e.g. variola virus, vaccinia virus), enteroviruses (e.g. poliovirus, coxsackievirus), hepatitis viruses (including A, B and C), herpesviruses (e.g. Herpes simplex virus, varicella-zoster virus, cytomegalovirus, Epstein-Barr virus), rotaviruses,

Norwalk viruses, hantavirus, arenavirus, rhabdovirus (e.g. rabies virus), retroviruses (including HIV, HTLV-I and -II), papovaviruses (e.g. papillomavirus), polyomaviruses, and picornaviruses.

18. A method of attaching a first compound to a second compound by:

a) glycosylation of said first compound with a promiscuous O-linked-glycosyltransferase;

b) oxidation of said glycosylation to produce a aldehyde-derivitized first compound; and,

c) reacting said aldehyde-derivitized first compound with a hydrazide-derivitized second compound to attach said first compound to said second compound.

19. The method of Claim 18 wherein the binding domain of said first compound is a binding moiety and said second compound is a linker.

20. The method of Claim 19 wherein said glycosylation does not decrease the binding of the binding moiety to its cognate.

21. A method of detecting a pathogen using a biosensor, wherein said biosensor comprises:

a) a terminal dendrimer attached to said substrate by at least two attachment moieties;

b) a linker comprising:

i) at least a first hydrophilic polymer; and

ii) a rigidity component; and

c) a binding moiety.

wherein said binding moiety specifically interacts with a target analyte in a detectable manner.

22. A method of atomic force microscopy employing the composition of Claim 1.

23. A method of employing the composition of Claim 1 in a surface plasmon resonance detection system.

24. A method of employing the composition of Claim 1 in a quartz crystal microbalance detection system.